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Abnormal prostatic cells in ejaculates from men with prostatic cancer--a preliminary report.

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OBJECTIVE: To relate findings from a novel approach, ejaculate cytology, to the established reference, histopathology from transrectal ultrasonography (TRUS)-guided prostatic biopsies, in patients at risk of having prostatic cancer on the basis of an abnormal digital rectal examination (DRE) and/or an elevated serum prostate specific antigen (PSA).

PATIENTS SUBJECTS AND METHODS: Thirty-seven men suspected of having prostatic carcinoma provided ejaculate specimens which were collected in Hanks solution. The specimens were centrifuged to form a pellet from which smears were made for cytological examination. Immunohistochemical staining for PSA and prostatic acid phosphatase (PAP) were performed on embedded blocks of these cells. TRUS-guided sextant biopsies were performed for histological specimens using standard clinical procedures. A control group of 32 men < 30 years of age, with no family history of prostatic cancer, also produced specimens of ejaculate which were processed similarly.

RESULTS: Frankly malignant and atypical prostatic cells were identified in ejaculate specimens from 14 of the 37 patients. Of 12 patients with TRUS biopsies positive for malignancy, nine (75%) had abnormal cells in their ejaculates. Furthermore, five of 25 patients with negative biopsies for adenocarcinoma also had abnormal ejaculate cytology; two of these five patients had high-grade prostatic intra-epithelial neoplasia (PIN). In the control group, no PSA- or PAP-positive prostatic epithelial cells were identified. Normal prostatic cells were not seen in any of the ejaculate specimens examined.

CONCLUSIONS: These results indicate that ejaculate cytology, which is a non-invasive and easily repeated investigation, may prove to be a useful approach in the early detection of cancer of the prostate. However, its value in this role, together with the clinical significance of cytological findings, needs to be established, especially in relation to PSA and TRUS biopsy.

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